

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Ramesh B. Poola et al.

Confirmation No.: 5419

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal

Service as first class mail in an envelope

addressed to: Commissioner for Patents,

P.O. Box 1450, Alexandria, VA 22323-1450.

November 23, 2005

Diane G. Kapil

Application No.:

10/774,296

Filing Date:

February 2, 2004

For:

LARGE-BORE, MEDIUM-SPEED DIESEL ENGINE HAVING A PISTON CROWN BOWL

WITH ACUTE RE-ENTRANT ANGLE

Art Unit:

3747

Examiner Name:

McMahon, Marguerite J.

Attorney Docket:

0372-0083

Customer No.:

26568

Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

TRANSMITTAL OF REVOCATION OF POWER OF ATTORNEY AND APPOINTMENT OF NEW POWER OF ATTORNEY

Enclosed is a revocation of power of attorney and appointment of new power of attorney to be filed in the above-identified application. Statement Under 37 CFR 3.73(b) and a copy of a Patent Assignment in the chain of title are also submitted herewith.

Respectfully submitted,

DATE:

NAME:

Panasarn Aim Jirut Registration No. 51,849

Cook, Alex, McFarron, Manzo, Cummings & Mehler, Ltd.
200 W. Adams Street – Suite 2850
Chicago, IL 60606
(312) 236-8500
November 23, 2005



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

REVOCATION OF POWER OF ATTORNEY AND APPOINTMENT OF NEW POWER OF ATTORNEY

I hereby revoke all previous powers of attorney given in the patents and patent applications listed in the attached Schedule A of the Patent Assignment submitted herewith.

I hereby appoint the practitioners associated with the Customer Number 26568, my attorneys, with full power of substitution and revocation, to prosecute and to transact all business in the Patent and Trademark Office in connection with the patents and patent applications listed in the attached Schedule A of the Patent Assignment submitted herewith.

Please change the correspondence address for the patents and patent applications listed in Schedule A of the Patent Assignment submitted herewith to the address associated with Customer Number 26568.

Electro-Motive Diesel, Inc. is the assignee of record of the entire interest in the patents and patent applications listed in the attached Schedule A of the Patent Assignment submitted herewith. Statement under 37 CFR 3.73(b) is attached. The undersigned whose title appears below is authorized to act on behalf of the assignee.

Date: 18 April 2005

Thomas W. Rissman

Vice President and General Counsel

Electro-Motive Diesel, Inc.

(312) 266-2444

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

STATEMENT UNDER 37 CFR 3.73(b)

Electro-Motive Diesel, Inc., states that it is the assignee of the entire right, title and interest in the patents and patent applications identified in Schedule A of the Patent Assignment attached hereto.

The undersigned is authorized to act on behalf of the assignee.

Date: 18 April 2005

Thomas W. Rissman Vice President and General Counsel Electro-Motive Diesel, Inc. (312) 266-2444

PATENT ASSIGNMENT

THIS PATENT ASSIGNMENT (this "<u>Assignment</u>") is made as of this 4th day of April, 2005, by and between GENERAL MOTORS CORPORATION a Delaware corporation ("<u>Assignor</u>"), and ELECTRO-MOTIVE DIESEL, INC., a Delaware corporation ("<u>Assignee</u>").

WHEREAS, Assignor and Assignee are party to a Purchase and Sale Agreement, dated as of January 11, 2005, as amended (the "Agreement"), pursuant to which Assignor has agreed to transfer and Assignee has agreed to acquire certain Transferred Assets (as defined in the Agreement) including, without limitation, the United States patent registrations, pending patent applications and unpatented inventions set forth on Schedule A attached hereto and the foreign patent registrations and pending patent applications set forth on Schedule B attached hereto (collectively, the "Patents"); and

WHEREAS, Assignor wishes to transfer to Assignee, and Assignee wishes to acquire from Assignor, all of Assignor's right, title and interest in, to and under the Patents;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor hereby sells, assigns, conveys and transfers to Assignee all of Assignor's right, title and interest in, to and under the Patents, both U.S. and foreign, and in and to the underlying inventions (including any continuations, continuations-in-part, divisions, renewals, substitutes, reissues, reexaminations or extensions thereof or any legal equivalent thereof for the full term or terms for which the same may be granted), and in and to all income, royalties, damages and payments now or hereafter due or payable with respect thereto, and in and to all causes of action, either at law or in equity, and the right to sue, counterclaim, and recover for past, present or future infringement of the rights assigned herein. Assignor also assigns to said Assignee, its successors, legal representatives and assigns the right of priority for patent and utility model applications in all countries arising under any applicable international convention for the protection of industrial property and/or any internal priority legislation of such countries.

Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and the patent offices or agencies of all foreign countries, to record Assignee as assignee and owner of any and all of Assignor's rights in, to and under the Patents and to issue to Assignee any and all patents on said inventions or resulting from said patent applications or any continuations, continuations-in-part or divisions thereof, or resulting from any renewals, substitutions, reissuances, reexaminations or extensions of said patents, for the full term or terms for which the same may be granted.

This Assignment may be executed in any number of counterparts, each of which shall be deemed an original, and may be executed and delivered by facsimile, and all of such counterparts and facsimiles together shall constitute a single instrument.

[Signature page follows]

IN TESTIMONY WHEREOF, the parties hereto have caused this Assignment to be executed and delivered as of the date first above written.

Assignor	
A SET LEVE	

GENERAL MOTORS CORPORATION

	QUALIGUE INTO TOTAL
	By: Anne T. Larin Name: Anne T. Larin Title: Attorney-in-Fact for Watter G. Bo Treasurer
STATE OF Illinois) SS. COUNTY OF Cook)	
The foregoing assignment was acknowled April, 2005, by Anne T. Lancorporation, on behalf of the corporation. "OFFICIAL SEAL" Kathryn A. Germolec Notary Public, State of Illinois My Commission Exp. 03/26/2009	NOTARY PUBLIC My Commission Expires: 3/26/2009
	Assignee: ELECTRO-MOTIVE DIESEL, INC.
	By: 12 - 2 /- Name: Thomas W. Rissman Title: Up and General Counsel
STATE OF Illinois) SS. COUNTY OF Cook)	11.51
The foregoing assignment was acknowled April, 2005, by Thomas W. Corporation, on behalf of the corporation.	<u></u>
"OFFICIAL SEAL" Kathryn A. Germolec Notary Public, State of Illinois My Commission Exp. 03/26/2009	NOTARY PUBLIC My Commission Expires: 3/26/2009

13242050 03108219

Schedule A U.S. Patents and Patent Applications

			its sind i atom Approximation
		ACTIV	/e u.s. serial numbers
Filing	44	Invention	
Number	Filing Date	No.	Official title
09/911632	25-Jul-01	GP-300922	PARTICULATE GUIDE
09/9/11002			ENGINE CYLINDER POWER MEASURING AND BALANCE
10/128201	23-Apr-02	GP-300925	METHOD ANTI-BOUNCE NEEDLE VALVE FOR A FUEL INJECTOR
10/166885	11-Jun-02	GP-301232	ANTI-BOUNCE NEEDLE VALVET OKATI GEE INGES
10/172806	14-Jun-02	GP-302455	ARRANGEMENT OF RADIAL BOGIE ELECTRONICALLY CONTROLLED LATE CYCLE AIR INJECTION ELECTRONICALLY CONTROLLED LATE CYCLE AIR INJECTION ELECTRONICALLY CONTROLLED LATE CYCLE AIR INJECTION OF NOV AND
			The Adult of Charles TANEOUS REDUCTION OF NOA AND
		OD 201212	PARTICULATES EMISSIONS FROM A DIESEL ENGINE
10/193555	11-Jul-02	GP-301312	UNICEDIE FUEL IN JECTION SYSTEM
10/218716	14-Aug-02	GP-301313	THE FOR COMPLITING A MEASURE UNIAN
	i	ļ	LILTORGONIC SIGNAL HAVING APPLICATION TO IDENTITY
40/260276	6-Feb-03	GP-301573	LVALVE DEFECTS IN OPERATING ENGINES
10/360376 10/409485	8-Apr-03	GP-302308	DIESEL INJECTION SYSTEM WITH DUAL FLOW FUEL LINE
	8-Apr-03	GP-302493	TURBOCHARGER ROTOR
10/409514	0-Api-00		DIESEL ENGINE WATER PUMP WITH THRUST BEARING
10/423313	25-Apr-03	GP-302494	PRELOAD DIESEL ENGINE WATER PUMP WITH IMPROVED WATER SEAL
10/423319	25-Apr-03	GP-302496	DIESEL ENGINE WATER PUMP WITH IMPROVED OIL
10/420070			
10/423361	25-Apr-03	GP-302495	TRACTION MOTOR FAULT DETECTION SYSTEM
10/440049	16-May-03	GP-302022	LAYOVER HEATING SYSTEM FOR A LOCOMOTIVE
10/476133	25-Oct-03	GP-301366	THE STATE OF THE PERSON OF THE
		<u> </u>	ENGINE INCLUDING A PISTON HAVING A TOROIDAL
. 1	0 100	GP-301406	SURFACE
10/476134	25-Oct-03	GP-301400	COOL ANT DUMBE CAVITATION SUPPRESSOR
10/626510	24-Jul-03	GP-302991	THETHOD AND INTAKE CAM FOR RETAINING EXPLANATION
		}	RESIDUALS FOR EMISSIONS REDUCTION IN A DIESEL
10/656976	5-Sep-03	GP-302524	ENGINE
10/673032	26-Sep-03	GP-303049	ENGINE EMISSION CONTROL SYSTEM AND METHOD
10/673032	3-Dec-03	GP-302162	EMISSION REDUCTION KIT FOR EMD DIESEL ENGINES LOCATION-SENSITIVE ENGINE EMISSION CONTROL SYSTEM
10/12/001	<u> </u>		LOCATION-SENSITIVE ENGINE EMISSION CONTROL OF TEM
10/752734	7-Jan-04	GP-302753	AND METHOD LOCOMOTIVE DIESEL ENGINE TURBOCHARGER AND
			TURBINE STAGE CONSTRUCTED WITH TURBINE BLADE
		OD 202042	LANDARTON CURRESSION METHODOLOGY
10/762396	22-Jan-04	GP-303942	CENTRIFIGAL COMPRESSOR WITH CHANNEL RING DELINED
	00 lon 04	GP-302752	I INJUST DECIDE JUSTION CHANNEL
10/762397	22-Jan-04	O1 -002102	LASTHOD FOR ENGINE CONDITION CONTROL WITH
10/762590	21-Jan-04	GP-301230	TURBOCOMPRESSOR CONTROLLABLE BYPASS
10// 02090	21001101		
			LARGE-BORE, MEDIUM-SPEED DIESEL ENGINE HAVING
10/774296	6-Feb-04	GP-304476	PISTON CROWN BOWL WITH ACUTE RE-ENTRANT ANGLE PORTED ENGINE CYLINDER LINER WITH SELECTIVELY
13/11/200			LARCE LARDENED AND INDUCTION-DARDENED DONE
10/787420	26-Feb-04	GP-303364	TACTUOD AND INTAKE CAMEOR RELAINING EATIAGO
		OD 202524	RESIDUALS FOR EMISSIONS REDUCTION IN A DIESEL
10/912018	5-Aug-04	GP-302524	Theorem of the formation of the first of the

		ACTI	ve U.S. Serial numbers
		Invention	
Filing		No.	Official title
Number	Filing Date	140.	ENGINE
		05.004005	THE SECURITY SYSTEM AND METHOD
10/914815	10-Aug-04	GP-304335	ENGINE WITH OPTIMIZED ENGINE CHARGE AIR-COOLING
		00 00000	CYCTEM
10/914816	10-Aug-04	GP-303603	THE AFTERCOOL ER SYSTEM WITH SHARED FANS
10/922766	20-Aug-04	GP-304336	ENGINE WITH CHARGE AIR-COOLING SYSTEM WITH WATER
10/956645	1-Oct-04	GP-303604	HIGH EFFICIENCY SEMI-ARTICULATED RAILWAY POWER
			1
60/547007	23-Feb-04	GP-304834	OPTIMIZED LOW EMISSION 701 INTERNAL COMBUSTION
		00.004077	
60/548952	1-Mar-04	GP-304877	CYLINDER HEAD WITH IMPROVED HEAT TRANSFER AND
		on 202722	I STATE OF THE STA
60/550114	4-Mar-04	GP-303732	CHARGE AIR COOLER DESIGNED FOR TIER 2 LOCOMOTIVE
		GP-304833	
60/550835	5-Mar-04	GP-304033	OPTIMIZED LOW EMISSION TWO-STROKE INTERNAL
_	0.0404	GP-304877	L
60/551569	9-Mar-04	GF-304071	DIESEL-ELECTRIC LOCOMOTIVE ENGINE WASTE HEAT
	o to - 04	GP-305391	
60/577966	8-Jun-04	GF-303331	TELEVISION WITH VOP LOSS-RESISTANT VALVE SERING
	00 Con 04	GP-305891	The service COMPLIANT ENGINE APPLICATIONS
60/613774	28-Sep-04	01-000001	HIGH EFFICIENCY SEMI-ARTICULATED RAILWAY POWER
Ì		GP-304834	
		0. 00.00	DIESEL-ELECTRIC LOCOMOTIVE ENGINE WASTE HEAT
-		GP-305391	
			OPTIMIZED LOW EMISSION TWO-STROKE INTERNAL
İ		GP-304877	COMBUSTION ENGINE
			COMBUSTION ENGINE CHARGE AIR COOLER DESIGNED FOR TIER 2 LOCOMOTIVE
		GP-304833	DIESEL ENGINE
			CYLINDER HEAD WITH IMPROVED HEAT TRANSFER AND
		GP-303732	VALVE SEAT COOLING

ACTIVE U.S. PATENTS									
O A Blumbar	Grant Date	Invention No.	Expiration Date	Official title DRIVE MOTOR GEAR LUBRICANT					
Grant Number	GIGHT Sage			SEAL FOR LOCOMOTIVES AND THE					
	5-Aug-86	D-9150	25-Feb-05	LIKE					
4603865	5-Aug-60	<u> </u>		GROUND FAULT VOLTAGE LIMITING					
				FOR A LOCOMOTIVE ELECTRIC					
	• 00	D-9333	18-Mar-05	TRACTION MOTOR					
4608619	26-Aug-86	D-9333	70 Mar. 55	TWIN WINDING THREE-PHASE					
				ALTERNATOR WITH ZERO SLOT					
ĺ			9-Sep-05	COUPLING					
4609862	2-Sep-86	D-9092	3-3ep-00	INTERPOLE ASSEMBLY FOR A DC					
			20 Jan 05	MACHINE					
4616150	7-Oct-86	D-8695	28-Jan-05	SELF STEERING RAILWAY TRUCK					
4628824	16-Dec-86	D-8512	25-Feb-05	RAILWAY TRUCK WITH IMPROVED					
4020024				STEERING LINKAGE, DETACHABLE					
				SUSPENSION AND TRACTION					
4679506	14-Jul-87	D-9511	21-Nov-05	SUSPENSION AND TRACTION					

40.6	CONTRACTOR OF THE PARTY OF THE	AGTIVE	U.S. PATENT	<u> </u>
	Grant Date	Invention No.	Expiration Date	Official title
Grant Number	Glain Dage	1030 01030		MOTOR MOUNTED BRAKE
				THREE-AXLE RAILWAY TRUCK
	44 5.107	D-9514	2-Dec-05	STEERING LINKAGE
4679507	14-Jul-87	D-3314		TURBOCHARGER PLANETARY
	10 1 00	F-489	28-Aug-06	DRIVE
4719818	19-Jan-88	1-403		ENGINE WITH SEALING HEAD SEAT
	0.4	F-491	13-Nov-07	RING
4762103	9-Aug-88			LOCOMOTIVE AND MOTORIZED
		1		SELF-STEERING RADIAL TRUCK
	23-Aug-88	F-1155	3-Aug-07	THEREFOR
4765250	23-Aug-00			CENTRIFUGAL COMPRESSOR WITH
				AERODYNAMICALLY VARIABLE
10.45005	28-Mar-89	F-524	29-Apr-07	GEOMETRY DIFFUSER RAILWAY LOCOMOTIVE AND
4815935	20-Wai -00			STABILIZED SELF STEERING TRUC
				STABILIZED SELF STELKING THOS
4044072	27-Jun-89	F-103	3-Feb-07	THEREFOR MODIFIED ROLLED THREAD FORM
4841873	21-0011-00			FOR STUDS
5071201	10-Dec-91	G-6616	28-Feb-11	ENGINE PROTECTOR WITH NON-
5071301	10 000 0		_	OVERRIDE RESET
5111785	12-May-92	G-5005	11-Jul-11	RIDE-THROUGH PROTECTION
5111765	12 (())			CIRCUIT FOR A VOLTAGE SOURCE
]		INVERTER TRACTION MOTOR DRIV
5127085	30-Jun-92	G-5555	1-Apr-11	WHEEL LOCK, CENTERING AND
3127003				DRIVE MEANS AND
				TURBOCHARGER IMPELLER
			40 1.1 44	COMBINATION
5163816	17-Nov-92	G-4322	12-Jul-11	TURBOCHARGER ASSEMBLY AND
3100070				STABILIZING JOURNAL BEARING
			27-Nov-10	THEREFOR
5169242	8-Dec-92	G-4204	27-1404-10	GEAR CASE FOR LOCOMOTIVE
0.100			13-Feb-12	DRIVE SYSTEM
5207121	4-May-93	G-3362	13-1 6D-12	MODIFIED TRACTION MOTOR DRIV
				WITH HELICAL GEARS AND GEAR
		0.4054	24-Feb-12	INDEXING METHOD THEREFOR
5220847	22-Jun-93	G-1954	24702	RAIL LUBRICATION APPLICATION
		G-9764	16-Mar-12	SYSTEM
5251724	12-Oct-93	G-9704		LOCOMOTIVE ENGINE COOLING
		H-171029	17-Dec-13_	SYSTEM
5392741	28-Feb-95	[]-17 1020		METHOD FOR CROWN PLATING A
_				CAMPLATE AND A METAL-PLATED
	04 Mar 05	G-6274	14-Mar-14	CAMPLATE FORMED THEREBY
5398791	21-Mar-95	G-02/1		LOCOMOTIVE TRACTION CONTROL
	40 hm 05	G-10761	10-Nov-13	SYSTEM USING FUZZY LOGIC
5424948	13-Jun-95	- 3-10/01		RAILWAY LOCOMOTIVE DIESEL
				ENGINE SPEED/LOAD CONTROL
	00 km 05	H-168568	28-Mar-14	DURING AIR STARVATION
5425338	20-Jun-95	11 10000		ELECTRONIC MODULE PACKAGE
				AND MOUNTING HAVING
				DIAGONALLY DISPOSED GUIDE
- 100507	20-Jun-95	G-11444	15-Oct-13	PINS AND THREADED RODS
5426567	16-Jul-96	H-187352	13-Oct-14	TURBOCHARGER TURBINE WHEEL

			U.S. PATENTS	Official title
Grant Number	Grant Date	Invention No.	Expiration Date	AND SHAFT ASSEMBLY
				TURBOCHARGER DRIVE AND
			70.0	PLANET BEARING THEREFOR
5567056	22-Oct-96	H-187748	29-Sep-14	TURBOCHARGED ENGINE COOLING
000,000				APPARATUS
5598705	4-Feb-97	H-194245	12-May-15	ELECTRIC MOTOR COMMUTATOR
5668428	16-Sep-97	H-169580	22-Dec-15	LOCOMOTIVE ADHESION
3000420	10 00			ENHANCING SLIPPING DISCS
5775228	7-Jul-98	H-197069	14-Apr-17	FRACTURE PROCESS WITH BORE
OTTOLLO				DISTORTION CONTROLS
5775817	7-Jul-98	H-196482	4-Nov-16	AXLE SPRUNG MOTOR
5791256	11-Aug-98	H-199578	21-Feb-17	
5894825	20-Apr-99	H-200894	19-Feb-18	ENGINE LUBRICATION SYSTEM
	25-May-99	H-201989	25-Mar-17	ENGINE PISTON
5906182	25-May-99	11 20 1000		TURBOCHARGED ENGINE COOLING
i				SYSTEM CONTROL WITH FUEL
5040000	8-Jun-99	H-201376	28-Feb-17	ECONOMY OPTIMIZATION
5910099	0-3011-33			LOCOMOTIVE ADHESION
5040005	6-Jul-99	H-197067	3-Feb-17	ENHANCING MATERIAL MIXTURES
5919295	0-301-99	11 10.00.		LOCOMOTIVE ENGINE COOLING
0000704	28-Dec-99	H-199177	18-Nov-17	SYSTEM
6006731	20-060-33	1.100		COOLANT JACKETED CYLINDER
0070075	27-Jun-00	H-203573	2-Aug-19	LINER WITH STIFFENING RIBS
6079375	21-301-00	17 2000.1		TURBOCHARGER WITH NOZZLE
0007004	11-Sep-01	GP-300239	10-May-20	RING COUPLING
6287091		GP-300101	10-May-20	TURBINE INLET SCROLL
6302647	16-Oct-01	0,-000101		TURBOCHARGER THERMAL
2054045	12-Mar-02	GP-300241	10-May-20	ISOLATION CONNECTION
6354815	12-IVIAI-02	<u> </u>		TURBOCHARGER ROTOR WITH
0004004	2-Apr-02	GP-300926	29-Sep-20	ALIGNMENT COUPLINGS
6364634	2-Api-02	0, 000==		TURBOCHARGER SHAFT DUAL
0000077	9-Apr-02	GP-300047	10-May-20	PHASE SEAL
6368077		GP-300242	10-May-20	TURBOCHARGER SUPPORT
6371238	16-Apr-02	Q1 -3002-42		HIGH THRUST TURBOCHARGER
0.470550	12-Nov-02	GP-300046	24-Apr-21	ROTOR WITH BALL BEARINGS
6478553	12-1404-02	0, 000010		LOCOMOTIVE ENGINE COOLING
0.400000	31-Dec-02	GP-301233	21-Mar-21	SYSTEM AND METHOD
6499298	31-Dec-02	0. 00.1200		BEARING/SEAL MEMBER/ASSEMBLY
0.400004	31-Dec-02	GP-300238	29-Sep-20	AND MOUNTING
6499884	31-Dec-02	Or otolics		CONICALLY JOINTED
0.400000	31-Dec-02	GP-300240	10-May-20	TURBOCHARGER ROTOR
6499969	31-Dec-02	0. 000210		LOCOMOTIVE WHEEL SLIP
000 4000	21-Oct-03	GP-300923	11-Jun-22	CONTROL AND METHOD
6634303	21-00:00			TWO-STAGE FILTRATION
		Í		ASSEMBLY FOR A DIESEL ENGINE
6647072	18-Nov-03	GP-301111	11-Jun-22	CRANKCASE VENTILATION SYSTEM
6647973	10-1404 00			MULTI-ORIFICE NOZZLE AIR
				EVACUATOR ASSEMBLY FOR A
1	1		ļ	VENTILATION SYSTEM OF A DIESEL
6604057	24-Feb-04	GP-301109	13-Sep-22	ENGINE AND
6694957	2-7 1 00 0 1			DIESEL INJECTION IGNITER AND
6712035	30-Mar-04	GP-300703	26-Mar-22	METHOD

y y	Secretary Control of the Control of	ACTIVE	U.S. PATENTS	age of the state o
A Alambaa	Grant Date	Invention No.	Expiration Date	Official title
Grant Number	Glant Date			VARIABLE INJECTION RATE HIGH
0700450	27-Apr-04	GP-301231	7-Nov-22	PRESSURE FUEL PUMP
6726459	27-Api-04	01 001201		RADIAL BOGIE WITH STEERING
07.45700	8-Jun-04	GP-302456	14-Jun-22	BEAM MOUNT UNITIZED BRAKE
6745700	0-Juli-0-4	0, 002,00		ELECTRONICALLY-CONTROLLED
	1	1	2	LATE CYCLE AIR INJECTION TO
				ACHIEVE SIMULTANEOUS
				REDUCTION OF NOX AND
				PARTICULATES EMISSIONS FROM A
	00 lun 04	GP-301312	11-Jul-22	DIESEL ENGINE
6752131	22-Jun-04	01-301012		ARMATURE GROUND LOCATING
0700440	29 Son 04	GP-303283	25-Apr-23	TEST PROCESS AND EQUIPMENT
6798112	28-Sep-04			

	EL	ECTRO-MOTIVE ACTIVE INVENTION FILES	Inventor : Last
i d		Toponal	Name
Invention No.	Open date	Title	XU
GP-304208	25-Sep-03	INJECTOR KIT FOR LOWER EMISSION	MAHAKUL
GP-304208	25-Sep-03	INJECTOR KIT FOR LOWER EMISSION	IVIAITANOL
		SYSTEM CONTROL AND CONFIGURATION FOR	
	1	LOCOMOTIVE COMPRESSED AIR SYSTEM	
		PNEUMATICALLY ACTUATED CONDENSATE DRAIN	KECK
GP-304558	22-Dec-03	VALVES CONFIGURATION FOR	KLOK
		SYSTEM CONTROL AND CONFIGURATION FOR	
		LOCOMOTIVE COMPRESSED AIR SYSTEM PNEUMATICALLY ACTUATED CONDENSATE DRAIN	
		(KLARIC
GP-304558	22-Dec-03	VALVES	BIDDINGS
GP-304559	22-Dec-03	FLOW-TRAP GUIDE	D.D.D.I. (GO
		METHOD TO EQUALIZE CURRENTS IN PARALLEL-	MADSEN
GP-304651	20-Jan-04	CONNECTED DC TRACTION MOTORS METHOD TO EQUALIZE CURRENTS IN PARALLEL-	
		METHOD TO EQUALIZE CORRENTS IN TAIVILLE	CROSMAN III
GP-304651	20-Jan-04	CONNECTED DC TRACTION MOTORS ENGINE COOLING SYSTEM WITH MULTI-CORE	
			UZKAN
GP-304835	20-Feb-04	AFTERCOOLERS METHOD TO RECORD DATA FROM A REMOTE	
			LIGESKI
GP-306047	20-Oct-04	PROCESSOR METHOD TO RECORD DATA FROM A REMOTE	
		PROCESSOR	CROSMAN III
GP-306047	20-Oct-04	ON-BOARD MULTIPROCESSOR LOCOMOTIVE DATA	
	55 5 1 54	ACQUISITION METHOD	CROSMAN III
GP-306048	20-Oct-04	ON-BOARD MULTIPROCESSOR LOCOMOTIVE DATA	
	00.04.04	ACQUISITION METHOD	LIGESKI
GP-306048	20-Oct-04	ADAPTIVE TORQUE ESTIMATOR FOR	
	00 0-4 04	ASYNCHRONOUS MOTOR TRACTION APPLICATIONS	LIGESKI
GP-306049	20-Oct-04	ADAPTIVE TORQUE ESTIMATOR FOR	
	00 0-4 04	ASYNCHRONOUS MOTOR TRACTION APPLICATIONS	CROSMAN III
GP- <u>306049</u>	20-Oct-04	VO LIAOLII COLLO C	

Schedule B Foreign Patents and Patent Applications

Invention			OREIGN APPLI	Grant Date	Grant Number	Expiration Date
No.	Country	Filing Date	Filing Number	22-Jan-91	1279226	22-Jan-08
D-8512	CA	11-Aug-86	515661	22-Jair-31	3683853	27-Aug-06
	DE	27-Aug-86	86306593		258502	27-Aug-06
	EP	27-Aug-86	86306593		258502	27-Aug-06
	FR	27-Aug-86	86306593		258502	27-Aug-06
	GB	27-Aug-86	86306593	46 Oct 90	29808	11-Sep-06
	KR	11-Sep-86	8600007647	16-Oct-89	866472	26-Aug-06
	ZA	26-Aug-86	866472	40 D = 00	1246404	13-Dec-05
D-8834	CA	23-Jan-86	500214	13-Dec-88	1260524	26-Sep-06
D-9092	CA	12-Aug-86	515755	26-Sep-89		11-Aug-06
	CH	11-Aug-86	86306239		214774	11-Aug-06
	DE	11-Aug-86	86306239		3679482	
	EP	11-Aug-86	86306239		214774	11-Aug-06
D-9150	CA	12-Feb-86	501670	7-Nov-89	1262745	7-Nov-06
D-9511	CA	12-Nov-86	522699	15-May-90	1268993	15-May-07
F-1155	AU	14-Jul-88	19057		611923	14-Jul-08
	CA	26-Jul-88	572997	2-Jun-92	1302163	2-Jun-09
	DE	20-Jul-88	3824709		3824709	20-Jul-08
	GB	5-Jul-88	8815979	24-Jul-91	2208377	5-Jul-08
F-489	CA	25-Aug-87	545229	29-Jan-91	1279501	29-Jan-08
F-491	CA	17-Aug-87	544665	15-Oct-91	1290777	15-Oct-08
F-524	AU	8-Apr-88	14432		609796	8-Apr-08
-02-7	CA	18-Apr-88	564368	8-Sep-92	1307249	8-Sep-09
	DE	29-Mar-88	88302786.4		3860591	29-Mar-08
	EP	29-Mar-88	88302786.4		289140	29-Mar-08
	FR	29-Mar-88	88302786.4		289140	29-Mar-08
	GB	29-Mar-88	88302786.4		289140	29-Mar-08
	IT	29-Mar-88	88302786.4		289140	29-Mar-08
	KR	28-Apr-88	884860		43850	28-Apr-08
3-11513	AU	10-Feb-94	55015		654637	10-Feb-14
5-11513	CA	24-Jan-94	2114094		2114094	24-Jan-14
2 44524	CA	16-Dec-93	2111637	23-Mar-99	2111637	16-Dec-13
G-11531	CA	10-Feb-93	2089235	25-Feb-97	2089235	10-Feb-13
3-1954	CA	26-Oct-89	2001546	8-Nov-94	2001546	26-Oct-09
3-222		15-Jan-93	2087400	19-Dec-95	2087400	15-Jan-13
3-3362	CA	11-Nov-91	87742	21-May-93	633455	11-Nov-11
G-4204	AU	12-Aug-91	2048932	17-Jan-95	2048932	12-Aug-11
	CA		91202877.6	29-Mar-95	69108523	6-Nov-11
	DE	6-Nov-91	91202877.6	29-Mar-95	488434	6-Nov-11
	EP	6-Nov-91	91202877.6	29-Mar-95	488434	6-Nov-11
	FR	6-Nov-91	91202877.6	29-Mar-95	488434	6-Nov-11
	GB	6-Nov-91		20: MIGI :00	638189	1-Jul-12
-4322	AU	1-Jul-92	19355		2070188	2-Jun-12
	CA DE	2-Jun-92 26-Jun-92	2070188 92201920.3		69206342	26-Jun-12

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Invention No.	Country	Filing Date	Filing Number	Grant Date	Number	Expiration Date
3 40.	EP	26-Jun-92	92201920.3		522630	26-Jun-12
	FR	26-Jun-92	92201920.3		522630	26-Jun-12
	GB	26-Jun-92	92201920.3		522630	26-Jun-12
	KR	11-Jul-92	9212394		102014	11-Jul-12
0.5005	AU	24-Jun-92	18515		638897	24-Jun-12
G-5005	CA	14-Apr-92	2065963		2065963	14-Apr-12
	IN	22-Jun-92	380	22-Jun-92	180687	22-Jun-06
	MX	8-Jun-92	924001		180747	8-Jun-12
	ZA	23-Jun-92	924615		924615	23-Jun-12
0.0074	CA	31-Jan-95	2141533	13-Jun-00	2141533	31-Jan-15
G-6274	CA	9-Mar-93	2091312		2091312	9-Mar-13
G-9764	CA	11-Feb-02	2371470			11-Feb-22
GP-300046	CN	24-Apr-02	2118182.9			24-Apr-22
	DE	26-Feb-02	2004193.5			26-Feb-22
	EP	26-Feb-02	2004193.5			26-Feb-22
	FR	26-Feb-02	2004193.5			26-Feb-22
		26-Feb-02	2004193.5			26-Feb-22
	GB	18-Apr-02	2002/016985			18-Apr-22
00.00047	MX	3-Jul-01	2352021	23-Dec-03	2352021	3-Jul-21
GP-300047	CA	6-Jul-01	1116392			6-Jul-21
	CH	6-Jul-01	1116392			6-Jul-21
	DE	6-Jul-01	1116392			6-Jul-21
	EP	6-Jul-01	1116392			6-Jul-21
	FR	6-Jul-01	1116392			6-Jul-21
	GB	11-Jul-01	2001/007060			11-Jul-21
	MX	3-Jul-01	2352041			3-Jul-21
GP-300101	CA	6-Jul-01	1116393.8			6-Jul-21
	CH	6-Jul-01	1116393.8			6-Jul-21
	DE	6-Jul-01	1116393.8			6-Jul-21
	EP	6-Jul-01	1116393.8			6-Jul-21
	FR	6-Jul-01	1116393.8			6-Jul-21
	GB	11-Jul-01	2001/007061			11-Jul-21
	MX	7-Aug-01	2354817			7-Aug-21
GP-300238	CA	7-Aug-01 5-Sep-01	1121296.6			5-Sep-21
	CH	5-Sep-01 5-Sep-01	1121296.6			5-Sep-21
	DE		1121296.6			5-Sep-21
	EP	5-Sep-01	1121296.6			5-Sep-21
	FR	5-Sep-01	1121296.6			5-Sep-21
	GB	5-Sep-01	2001/009499			20-Sep-21
	MX	20-Sep-01	2352027	30-Dec-03	2352027	3-Jul-21
SP-300239	CA	3-Jul-01	1116391.2	00 200 00		6-Jul-21
	СН	6-Jul-01	1116391.2			6-Jul-21
	DE	6-Jul-01	1116391.2			6-Jul-21
	EP	6-Jul-01				6-Jul-21
	FR	6-Jul-01	1116391.2 1116391.2			6-Jul-21
	GB	6-Jul-01 11-Jul-01	2001/007062			11-Jul-21

	Sign Commence of the Commence		DREIGN APPLI	ganunsi?	Grant	
Invention	199		1	Grant Date	Number	Expiration Date
No.	Country	Filing Date	Filing Number	Gi Milita-Suite		3-Jul-21
GP-300240	CA	3-Jul-01	2352031			6-Jul-21
	CH	6-Jul-01	1116390.4			6-Jul-21
	DE	6-Jul-01	1116390.4			6-Jul-21
	EP	6-Jul-01	1116390.4			6-Jul-21
	FR	6-Jul-01	1116390.4			6-Jul-21
	GB	6-Jul-01	1116390.4			11-Jul-21
	MX	11-Jul-01	2001/007063		-	3-Jul-21
GP-300241	CA	3-Jul-01	2352029	C O et 04	1273766	6-Jul-21
0, 000	СН	6-Jul-01	1116389.6	6-Oct-04	1273766	6-Jul-21
	DE	6-Jul-01	1116389.6	6-Oct-04	1273766	6-Jul-21
	EP	6-Jul-01	1116389.6	6-Oct-04	1273766	6-Jul-21
	FR	6-Jul-01	1116389.6	6-Oct-04	1273766	6-Jul-21
	GB	6-Jul-01	1116389.6	6-Oct-04	12/3/00	11-Jul-21
	MX	11-Jul-01	2001/007064		2352022	3-Jul-21
GP-300242	CA	3-Jul-01	2352022	30-Dec-03	2352022	6-Jul-21
GF-300242	CH	6-Jul-01	1116388.8			6-Jul-21
	DE	6-Jul-01	1116388.8			6-Jul-21
	EP	6-Jul-01	1116388.8		ļ	6-Jul-21
	FR	6-Jul-01	1116388.8		<u> </u>	6-Jul-21
	GB	6-Jul-01	1116388.8			11-Jul-21
	MX	11-Jul-01	2001/007065			21-Jan-23
GP-300703	AT	21-Jan-03	3001194.4			21-Jan-23
GP-300703	DE	21-Jan-03	3001194.4			21-Jan-23
	EP	21-Jan-03	3001194.4			21-Jan-23
	FR	21-Jan-03	3001194.4			21-Jan-23
	GB	21-Jan-03	3001194.4			26-Mar-23
	JP	26-Mar-03	2003-84174		<u> </u>	3-Jun-22
GP-300922	DE	3-Jun-02	2012199.2			3-Jun-22
GP-300922	EP	3-Jun-02	2012199.2		 	3-Jun-22
	FR	3-Jun-02	2012199.2		 	3-Jun-22
	GB	3-Jun-02	2012199.2		<u> </u>	3-Jun-22
	NL	3-Jun-02	2012199.2		<u> </u>	3-Jun-22
	SE	3-Jun-02	2012199.2		 	4-Apr-23
GP-300923	DE	4-Apr-03	3007824			4-Apr-23
GP-300323	EP	4-Apr-03	3007824			4-Apr-23
	FR	4-Apr-03	3007824			4-Apr-23
	GB	4-Apr-03	3007824		 	4-Apr-23
	NL	4-Apr-03	3007824			4-Apr-23
	SE	4-Apr-03	3007824			3-Feb-23
OD 200025	DE	3-Feb-03	3002322			
GP-300925	EP	3-Feb-03	3002322			3-Feb-23
	FR	3-Feb-03	3002322		<u> </u>	3-Feb-23
	GB	3-Feb-03	3002322		<u> </u>	3-Feb-23
	CA	7-Aug-01	2354818			7-Aug-21
GP-300926	CH	5-Sep-01	1121297.4			5-Sep-21
	DE	5-Sep-01	1121297.4		1	5-Sep-21

ACTIVE FOREIGN APPLICATIONS/PATENTS Grant						
Invention	Country	Filing Date	Filing Number	Grant Date	Number	Expiration Date
No.	EP	5-Sep-01	1121297.4			5-Sep-21
		5-Sep-01	1121297.4			5-Sep-21
	FR	5-Sep-01	1121297.4			5-Sep-21
	GB	19-Sep-01	2001/009444			19-Sep-21
	MX		3008105.3			7-Apr-23
GP-301109	DE	7-Apr-03	3008105.3			7-Apr-23
	EP	7-Apr-03	3008105.3			7-Apr-23
	FR	7-Apr-03	3008105.3			7-Apr-23
	GB	7-Apr-03	3008107.9			7-Apr-23
GP-301111	DE	7-Apr-03	3008107.9			7-Apr-23
	EP	7-Apr-03	3008107.9			7-Apr-23
	FR	7-Apr-03	3008107.9			7-Apr-23
	GB	7-Apr-03				21-May-23
	MX	21-May-03	2003/004485 3001192.8			21-Jan-23
GP-301230	DE	21-Jan-03				21-Jan-23
<u> </u>	EP	21-Jan-03	3001192.8			21-Jan-23
	FR	21-Jan-03	3001192.8			21-Jan-23
	GB	21-Jan-03	3001192.8			26-Sep-23
GP-301231	AT	26-Sep-03	3021861.4			26-Sep-23
Gr 007201	DE	26-Sep-03	3021861.4			26-Sep-23
	EP	26-Sep-03	3021861.4			26-Sep-23
	FR	26-Sep-03	3021861.4			26-Sep-23
	GB	26-Sep-03	3021861.4			29-Oct-23
	MX	29-Oct-03	2003/009906			7-Apr-23
GP-301232	AT	7-Apr-03	3008106.1		 	12-May-23
01 00.202	BR	12-May-03	PI0301558-0		 	7-Apr-23
	DE	7-Apr-03	3008106.1			7-Apr-23
	EP	7-Apr-03	3008106.1			7-Apr-23
	FR	7-Apr-03	3008106.1		 	7-Apr-23
	GB	7-Apr-03	3008106.1			21-May-23
	MX	21-May-03	2003/004484			15-May-23
GP-301312	AT	15-May-03	3010941.7			15-May-23
GP-301312	DE	15-May-03	3010941.7		<u> </u>	15-May-23
	EP	15-May-03	3010941.7			15-May-23
	FR	15-May-03	3010941.7		<u></u>	15-May-23
	GB	15-May-03	3010941.7		ļ	13-May-23
00.004242	AT	13-Jun-03	3013558.6			13-Jun-23
GP-301313	DE	13-Jun-03	3013558.6			13-Jun-23
	EP	13-Jun-03	3013558.6			
		13-Jun-03	3013558.6			13-Jun-23
	FR	13-Jun-03	3013558.6			13-Jun-23
	GB	24-Oct-03				27-Apr-21
GP-301366 GP-301406	BR	27-Oct-03	10296725.3			27-Apr-21
	DE	14-Nov-03	1000			27-Apr-21
	GB	27-Oct-03	0302833-9			27-Apr-21
	SE		02/13289			27-Apr-22
	WO AU	27-Apr-02 27-Oct-03	2002308513			27-Apr-22

ACTIVE FOREIGN APPLICATIONS/PATENTS Grant						
Invention	Country	Filing Date	Filing Number	Grant Date	Number	Expiration Date
No.	DE	27-Oct-03	10296726.1			27-Apr-22
	GB	14-Nov-03	326607.9			27-Apr-22
	MX	29-Oct-03	2003/009898			27-Apr-22
		27-Apr-02	02/13411			27-Apr-22
	WO	13-Feb-03	3250893.9			13-Feb-23
GP-301573	AT_	14-Feb-03	2003200492			14-Feb-23
	AU	13-Feb-03	3250893.9			13-Feb-23
	DE	13-Feb-03	3250893.9			13-Feb-23
	EP	13-Feb-03	3250893.9			13-Feb-23
	FR	13-Feb-03	3250893.9			13-Feb-23
	GB		2003/001370			14-Feb-23
	MX	14-Feb-03	2004/201491			7-Apr-24
GP-302308	AU	7-Apr-04	4004836.5			2-Mar-24
	DE	2-Mar-04 2-Mar-04	4004836.5			2-Mar-24
	EP		4004836.5			2-Mar-24
	FR	2-Mar-04	4004836.5			2-Mar-24
GP-302455	GB	2-Mar-04	2004-104789			31-Mar-24
	JP	31-Mar-04	2424129			28-Mar-23
	CA	28-Mar-03	03148641.X			16-Jun-23
	CN	16-Jun-03	2003/2553	31-Dec-03	2003/2553	1-Apr-23
	ZA	1-Apr-03	2423646	0. 233		28-Mar-23
GP-302456	CA	28-Mar-03	3148640.1			16-Jun-23
	CN	16-Jun-03	2003/2549	31-Dec-03	2003/2549	1-Apr-23
	ZA	1-Apr-03	2003/2349	0, 200		7-Apr-24
GP-302493	AU	7-Apr-04	2457467			11-Feb-24
	CA	11-Feb-04	4004835.7			2-Mar-24
	CH	2-Mar-04	4004835.7			2-Mar-24
	DE	2-Mar-04	4004835.7			2-Mar-24
	EP	2-Mar-04	4004835.7			2-Mar-24
	FR	2-Mar-04	4004835.7			2-Маг-24
	GB	2-Mar-04	2004201482			7-Apr-24
GP-302494	AU	7-Apr-04	4004661.7			1-Mar-24
	DE	1-Mar-04	4004661.7			1-Mar-24
	EP	1-Mar-04	4004661.7			1-Mar-24
	FR	1-Mar-04				1-Mar-24
	GB	1-Mar-04	4004661.7			7-Apr-24
GP-302495	AU	7-Apr-04	2004201493 4004662.5			1-Mar-24
	DE	1-Mar-04				1-Mar-24
	EP	1-Mar-04	4004662.5			1-Mar-24
	FR	1-Mar-04	4004662.5			1-Mar-24
	GB	1-Mar-04	4004662.5			7-Apr-24
GP-302496	AU	7-Apr-04	2004201489			1-Mar-24
	DE	1-Mar-04	4004663.3			1-Mar-24
	EP	1-Mar-04	4004663.3			1-Mar-24
	FR	1-Mar-04	4004663.3		<u> </u>	1-Mar-24
	GB	1-Mar-04	4004663.3			22-Jul-24
GP-302524	AU	22-Jul-04	2004203345		l	<u></u>

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Invention	Country	Filing Date	Filing Number	Grant Date	Number	Expiration Date
No.	DE	26-Jul-04	4017671.1			26-Jul-24
	EP	26-Jul-04	4017671.1			26-Jul-24
	FR	26-Jul-04	4017671.1			26-Jul-24
	GB	26-Jul-04	4017671.1			26-Jul-24
27.00040	AU	22-Jul-04	2004203343			22-Jul-24
GP-303049	DE	18-Aug-04	4019566.1			18-Aug-24
	EP	18-Aug-04	4019566.1			18-Aug-24
	FR	18-Aug-04	4019566.1			18-Aug-24
	GB	18-Aug-04	4019566.1			18-Aug-24
	CA	8-Feb-95	2142078	28-Jul-98	2142078	8-Feb-15
H-168568	CA	4-Nov-94	2135108	9-Sep-97	2135108	4-Nov-14
H-171029	CA	28-Aug-95	2157091	2-May-00	2157091	28-Aug-15
H-187352 H-187748	CA	18-Sep-95	2158509	31-Aug-99	2158509	18-Sep-15
	DE	27-Sep-95	19536017.6			27-Sep-15
	GB	8-Sep-95	9519804	23-Apr-97	2293640	8-Sep-15
	MX	18-Sep-95	9503988	18-Sep-95	194583	18-Sep-15
10.40.45	AU	17-Apr-96	50700	17-Jul-97	680163	17-Apr-16
H-194245	CA	26-Mar-96	2172688	13-Jul-99	2172688	26-Mar-16
	DE	15-Apr-96	96200951	21-Nov-01	742353	15-Apr-16
	EP	15-Apr-96	96200951	21-Nov-01	742353	15-Apr-16
	FR	15-Apr-96	96200951	21-Nov-01	742353	15-Apr-16
	GB	15-Apr-96	96200951	21-Nov-01	742353	15-Apr-16
	KR -	3-May-96	14461	20-Jan-99	190514	3-May-16
	AU	13-Jan-98	51843/98	16-Sep-99	705877	13-Jan-18
H-197067	CA	16-Jan-98	2227351	16-Sep-03	2227351	16-Jan-18
	MX	23-Jan-98	1998/000659			23-Jan-18
	ZA	16-Jan-98	980383		98/0383	16-Jan-18
	AU	29-Oct-98	89573/98	29-Oct-98	702851	29-Oct-19
H-199177		20-Oct-98	98203535.4			20-Oct-18
	DE EP	20-Oct-98	98203535.4			20-Oct-18
	ES	20-Oct-98	98203535.4			20-Oct-18
	GB	20-Oct-98	98203535.4			20-Oct-18